

REMARKS

Claims 1-3 and 7-12 are all the pending claims. Support for new claims 8-12 may be found in the specification as originally filed, for example, in original claims 2-6.

I. The Examiner's References Cited

The Examiner has cited U.S. Patent 6,077,639 (Semura et al). Semura et al is related to JP2000/172008. However, the Examiner did not list Semura et al on a PTO Form 892.

To complete the record, Applicants request that Semura et al U.S. Patent 6,077,639 be properly listed on a PTO Form 892.

II. The Rejection Based on Semura et al

Claims 1-7 are rejected under 35 U.S.C. 102(b) as allegedly being clearly anticipated by Semura et al, U.S. Patent 6,077,639.

Applicants respectfully submit that the present invention is not anticipated by or obvious over the disclosures of Semura and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

The Examiner states that the "cited prior art discloses a toner binder for electrography ... wherein the unreacted bisphenols in the resin is less than 15 ppm".

In fact, however, Semura discloses a polyester resin wherein an alkylene oxide adduct of bisphenol A of which addition molar number is 3 or more is not present in the polyester resin, or remains in an amount of less than 1.0% by weight. The "an alkylene oxide adduct of bisphenol A of which addition molar number is 3 or more" is different from the recitation of the present

claim 1. Claim 1 relates to content of unreacted bisphenols, not alkylene oxide adducts. Thus, standards of such content are quite different from each other. Even if Semura suggests that low content of impurities is preferable, level of the content is as quite high 1.0% by weight, or preferably, 0.5% by weight (= 500 ppm).

Semura does not teach or disclose the content of unreacted bisphenols in a polyester resin being 15 ppm or less.

In addition, the Examiner states that the "alkoxylated BPA is purified by treatment with a silicate". Applicants respectfully submit that this is incorrect. The description of Semura, column 5, lines 16-25, relates to pre-treatment for analysis by gas chromatography. "TMSI-H" (column 5, line 20) is a silanizing agent, but is not a silicate. There are no teachings in Semura concerning the purification with a silicate.

Further, as is mentioned on page 6, lines 10 to 15, in the instant specification, content of unreacted bisphenols in the alkylene oxide adduct is generally as high as 20 ppm to 5%.

Thus, Semura only discloses a conventional composition of resin, and such a low level as 15 ppm or less of unreacted bisphenols in the polyester resin is neither taught nor suggested in Semura.

For the above reasons, it is respectfully submitted that the subject matter of claims 1-3 and 7-9 is neither taught by nor made obvious from the disclosures of Semura and it is requested that the rejection under 35 U.S.C. §102 be reconsidered and withdrawn.

III. The Rejection Based on JP2000-137350

Claims 1-3 and 7 are rejected under 35 U.S.C. 102(b) as allegedly being clearly anticipated by JP2000-137350.

Applicants respectfully submit that the present invention is not anticipated by or obvious over the disclosures of JP2000-137350 and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

For the convenience of the Examiner, attached is a partial translation of JP2000-137350. JP 2000-137350 discloses a toner consisting of a resin and additives. After boiling of 100 g of the component resin in an aqueous solution for 10 minutes, the concentration of phenol compounds eluted into the aqueous solution is 10 ppm or less.

On the other hand, resins constituted of polyoxyalkylene ethers of bisphenols are not disclosed in JP 2000-137350. See the partial translation of JP 2000-137350. Furthermore, JP 2000-137350 does not disclose any of resin made from bisphenol A. Thus, JP 2000-137350 teaches merely an evident effect that content of bisphenol A eluted from a toner is low if any of bisphenol A is not used at all as materials.

For the above reasons, it is respectfully submitted that the subject matter of claims 1-3 and 7-9 is neither taught by nor made obvious from the disclosures of JP 2000-137350 and it is requested that the rejection under 35 U.S.C. §102 be reconsidered and withdrawn.

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IV. The Obviousness Rejection Based on JP 3041045 in view of Semura or JP 2000-137350

Claims 1-7 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over JP 3041045 in view of Semura or JP 2000-137350.

Applicants respectfully submit that the present invention is not anticipated by or obvious over the disclosures of JP 3041045 in view of Semura et al 6,077,639 or JP 2000-137350 and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

Claims 1 of the present invention is not obvious from JP 3041045 in view of Semura et al 6,077,639 or JP 2000-137350, because none of those references teach a toner binder comprising a polyester resin with the content of unreacted bisphenols in the polyester resin being 15 ppm or less.

See Applicants comments in Sections II and III above for the analysis that Semura and JP 2000-137350 do not teach or disclose toner binder comprising a polyester resin with the content of unreacted bisphenols in the polyester resin being 15 ppm or less.

As to the combination with JP 3041045, the method disclosed in JP 3041045 corresponds to one of conventional methods described on page 5, line 35 to page 6, line 15 in the instant specification. Indeed, the Examples in JP 3041045 show that the content of bisphenol A ("BIS-A") cannot be lower than 0.003% by weight (= 30 ppm) by the process of JP 3041045 (Example 1 of JP 3041045).

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Therefore, a person skilled in the art cannot obtain any of polyester resins containing as low as 15 ppm or less of unreacted bisphenols, even if the teachings of JP 3041045, Semura and JP 2000-137350 are combined.

Furthermore, such polyester resins as obtained in JP 3041045 cannot attain the effect of the present invention. As is shown in the additional experimentation described in the attached Declaration Under Rule 132 by Mr. Takashi Yamashiro, the inventor of the present application, the effect of the present invention cannot be attained if content of unreacted bisphenols is higher. The 132 Declaration shows a comparative toner (HT-2) that was produced from a composition produced in the same manner as Example 3 of JP 3041045. In particular, as compared with the toners of the invention (see Table 1, page 24 of the instant specification), the properties of the inventive toners are unexpectedly improved over the properties of HT-2. See particularly the long-term running ability of HT-2 is “fair” (the image unevenness is observed to a degree that the image is slightly affected) as compared to “fine” for the inventive toners (no image unevenness is observed).

Thus, the effect of the present invention cannot be expected from teachings of JP 3041045, Semura and JP 2000-137350.

For the above reasons, it is respectfully submitted that the subject matter of claims 1-3 and 7-9 is neither taught by nor made obvious from the disclosures of JP 3041045, Semura et al 6,077,639 or JP 2000-137350, either alone or in combination, and it is requested that the rejection under 35 U.S.C. §103(a) be reconsidered and withdrawn.

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V. New Process Claims 10-12 are Patentable over the Cited Art

Claims 10-12 relate to a process for producing a toner binder, comprising the step of purifying polyoxyalkylene ether (A) of a bisphenols. This process makes it possible to reduce content of unreacted bisphenols in polyester resin to be 15 ppm or less. Such a process is neither taught nor suggested in any of cited references. Thus, claims 10-12 are novel over, and unobvious from, any of cited references.

VI. Conclusion

In view of the aforementioned amendments and accompanying remarks, Applicant submits that that the pending claims are in condition for allowance. Applicant requests such action at an early date.

If this Amendment is not timely filed, Applicant respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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